

COMMON CORE STATE STANDARDS OVERVIEW

The Shifts:

What they are and why they are important

Rationale for the CCSS

- Declining US competitiveness with other developed countries
- High rates of college remediation
- NAEP performance that is largely flat over the past 40 years in 8th grade
 - ▣ Slight improvement at the 4th grade level
 - ▣ Slight decline at the high school level

Principles of the CCSS

- Aligned to requirements for college and career readiness
- Based on evidence
- Honest about time



ELA/Literacy: 3 shifts

The What

1. **Building knowledge through content-rich nonfiction**
2. Reading, writing, and speaking grounded in **evidence from text**, both literary and informational
3. Regular practice with **complex text** and its **academic language**

The Why: Shift One

Building knowledge through content-rich nonfiction

- Much of our knowledge base comes from informational text
- Informational text makes up vast majority of required reading in college/workplace (80%)
- Informational text harder for students to comprehend than narrative text
- Yet students are asked to read very little of it in elementary (7 - 15%) and middle school
- CCSS moves percentages to
 - ▣ 50:50 at elementary level
 - ▣ 75:25 at secondary level (includes ELA, science, social studies)

The Why: Shift Two

Reading, writing & speaking grounded in evidence, both literary and informational

- Most college and workplace writing is evidence-based and expository in nature (not narrative)
- Ability to cite evidence differentiates student performance on NAEP
- Standards in writing ask students to respond to evidence-based writing prompts (inform/argue)
- Standards in speaking and listening require students to prepare for and refer to evidence on ideas under discussion
- Standards in reading require students to respond to text-dependent questions with evidence-based claims

The Why: Shift Three

Regular Practice with Complex Text and its Academic Language

- Gap between complexity of college and high school texts is huge
- What students can read, in terms of complexity is greatest predictor of success in college (ACT study)
- Too many students reading at too low a level (<50% of graduates can read sufficiently complex texts)
- Standards include a staircase of increasing text complexity from elementary through high school
- Standards also focus on building vocabulary that is shared across many types of complex texts and many content areas

Mathematics: 3 shifts

The What

1. **Focus:** Focus strongly where the standards focus.
2. **Coherence: Think** across grades, and **link** to major topics
3. **Rigor:** In major topics, pursue **conceptual understanding**, procedural skill and **fluency**, and **application**

The Why: Shift One

Focus strongly where the Standards focus

- Significantly narrow the scope of content and deepen how time and energy is spent in the math classroom
- Focus deeply only on what is emphasized in the standards, so that students gain strong foundations



Traditional U.S. Approach

K

12

Number and
Operations



Measurement
and Geometry



Algebra and
Functions

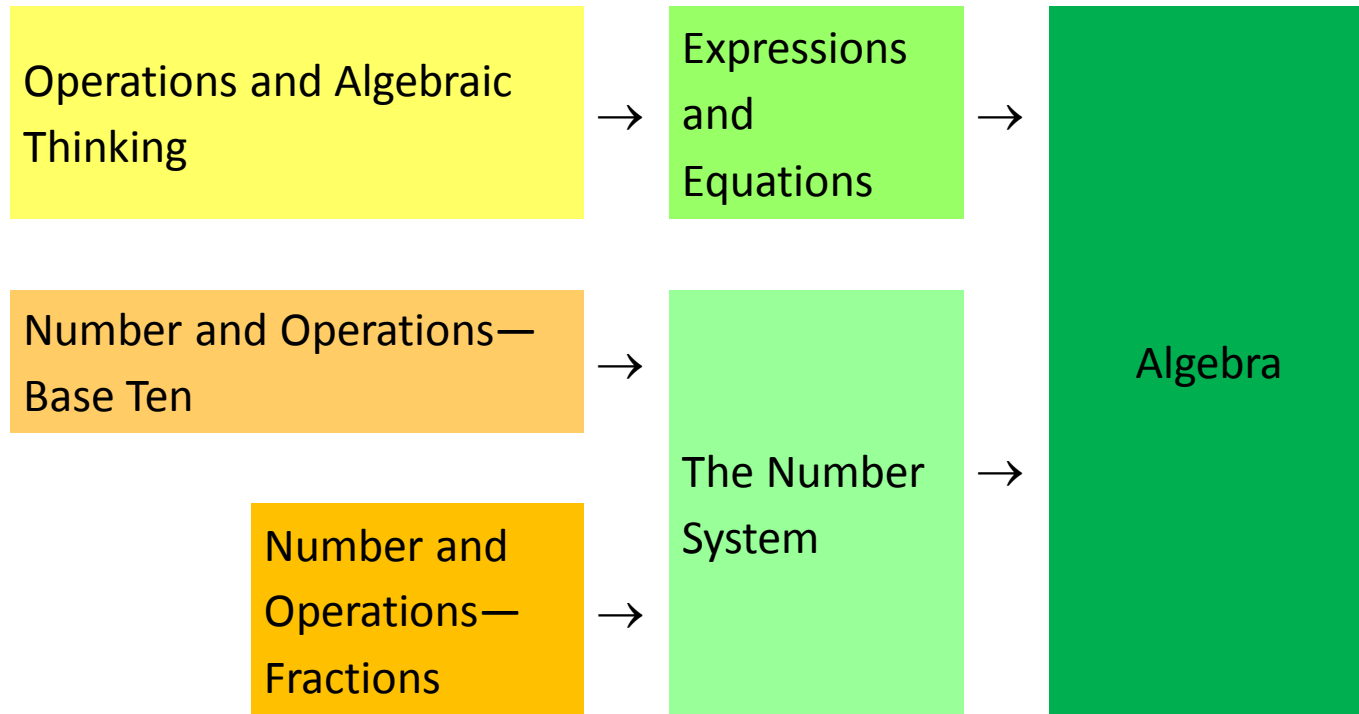


Statistics and
Probability





Focusing attention within Number and Operations



K 1 2 3 4 5 6 7 8 High School

The Why: Shift Two

Coherence Think across grades, and link to major topics within grades

- Carefully connect the learning within and across grades so that students can build new understanding onto foundations built in previous years.
- Begin to count on solid conceptual understanding of core content and build on it. Each standard is not a new event, but an extension of previous learning.



Coherence: Think across grades

Fraction example:

“The **coherence** and sequential nature of mathematics dictate the foundational skills that are necessary for the learning of algebra. The most important foundational skill not presently developed appears to be proficiency with fractions (including decimals, percents, and negative fractions). **The teaching of fractions must be acknowledged as critically important and improved before an increase in student achievement in algebra can be expected.**”

Final Report of the National Mathematics Advisory Panel (2008, p. 18)



Coherence: Link to major topics within grades

Example: data representation

Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. Solve one- and two-step “how many more” and “how many less” problems using information presented in scaled bar graphs. *For example, draw a bar graph in which each square in the bar graph might represent 5 pets.*

Standard 3.MD.3



Coherence: Link to major topics within grades

Example: Geometric measurement

Geometric measurement: understand concepts of area and relate area to multiplication and to addition.

3.MD, third cluster



The Why: Shift Three

Rigor In major topics, pursue conceptual understanding, procedural skill and fluency, and application

- The CCSSM require a balance of:
 - Solid conceptual understanding
 - Procedural skill and fluency
 - Application of skills in problem solving situations

- This requires equal intensity in time, activities, and resources in pursuit of all three

Priorities in Mathematics

Grade	Priorities in Support of Rich Instruction and Expectations of Fluency and Conceptual Understanding
K–2	Addition and subtraction, measurement using whole number quantities
3–5	Multiplication and division of whole numbers and fractions
6	Ratios and proportional reasoning; early expressions and equations
7	Ratios and proportional reasoning; arithmetic of rational numbers
8	Linear algebra



Required Fluencies in K-6

Grade	Standard	Required Fluency
K	K.OA.5	Add/subtract within 5
1	1.OA.6	Add/subtract within 10
2	2.OA.2 2.NBT.5	Add/subtract within 20 (know single-digit sums from memory) Add/subtract within 100
3	3.OA.7 3.NBT.2	Multiply/divide within 100 (know single-digit products from memory) Add/subtract within 1000
4	4.NBT.4	Add/subtract within 1,000,000
5	5.NBT.5	Multi-digit multiplication
6	6.NS.2,3	Multi-digit division Multi-digit decimal operations

Implementation

- The CCSS uses an eraser and pen and provides time and space to focus on doing fewer things better
- Implementation of the CCSS must be integrated into other efforts of educational improvement, not one more thing
- Commit to a small number of metrics that address
 - ▣ Teacher Practice and Knowledge
 - ▣ Instructional Materials and Resources
 - ▣ Student Work

Resources

- www.achievethecore.org
- www.pta.org/4446.htm
- <http://parconline.org/parcc-content-frameworks>

Instructional Resources

- **Model Content Frameworks:** Designed to support implementation of the CCSS, the Model Content Frameworks in Mathematics and ELA/Literacy provide readers with an analysis of the standards, including areas of emphasis and considerations regarding balance among instructional materials.<http://www.parcconline.org/in-the-classroom>
- **Tri State Collaborative Rubrics:** The Tri-State Collaborative (comprised of educational leaders from Massachusetts, New York, and Rhode Island and facilitated by Achieve) has developed rubrics and review processes so that educators may evaluate the quality of lessons and units intended to address the Common Core State Standards for mathematics and ELA/literacy. At the page, click on the “Tools” tab, found half-way down the page.<http://www.achieve.org/achieving-common-core>

Resources and Tools Around Instructional Practice

- **OER Commons Rubric:** To help states, districts, teachers, and other users determine the degree of alignment of OERs to the Common Core State Standards, and to determine aspects of quality of OERs, Achieve has developed eight rubrics in collaboration with leaders from the OER community (download link for rubrics below).<http://www.oercommons.org/courses/oer-rubrics-achieve-org>
- **Illustrative Mathematics:** This website houses sample mathematics tasks illustrative of the CCSS. It is an ever growing archive, juried by trained alignment experts.<http://www.illustrativemathematics.org>

Resources and Tools Around Instructional Practice

- **Common Core Tools:** This site contains news about tools that are being developed to support implementation of the Common Core State Standards in mathematics. <http://commoncoretools.me>
- **National Council of Supervisors of Mathematics:** These ready-to-use professional development materials are designed to help teachers understand the Standards for Mathematical Practice and implement them in their classrooms. The Noyce Foundation's Inside Mathematics website [insidemathematics.org] provides the core resources for these materials. Each module supports a 1.5- to 3-hour session that focuses on one or two of the mathematical practices. <http://www.mathedleadership.org/ccss/materials.html>

Resources and Tools Around Instructional Practice

- **Sample Texts:** North Carolina has parsed Appendix B of the CCSS in ELA/Literacy by sample texts available in the public domain free of charge. [Sample texts available in the public domain](#)
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- **“Instructional” Shifts:** Student Achievement Partners has created this site to support implementation of the Common Core State Standards. It includes the “instructional” shifts, as well as other resources. <http://www.achievethecore.org/steal-these-tools>

Resources and Tools Around Instructional Practice

- **Text Complexity:** The Council of Chief State School Officers (CCSSO) held a webinar focused on issues of text complexity. It can be downloaded here.http://www.ccsso.org/Resources/Digital_Resources/The_Common_Core_State_Standards_Supporting_Districts_and_Teachers_with_Text_Complexity.html

Professional Development and Implementation Plans

- **New Mexico:** New Mexico has posted resources for teachers at this site, including strategies and activities. <http://newmexicocommoncore.org/subcategories/view/88/teacher-resources>
- The expectations for the state's professional development are explained on page 65 of their implementation plan. [NM Implementation Plan](#)

Professional Development and Implementation Plans

- **Arkansas:** Arkansas' strategic plan includes direct information on professional development (found half-way down the page), as well as several other resources. <http://ideas.aetn.org/commoncore/strategic-plan>
- **Ohio:** Ohio has developed 774 model curricula units (K-1 2 model curricula for each cluster in [mathematics](#) and each topic in [ELA](#)).

Professional Development and Implementation Plans

- **Kentucky:** Kentucky is developing instructional resources for [CIITS](#) (Continuous Instructional Improvement Technology System). CIITS will connect standards, electronically stored instructional resources, curriculum, formative assessments, instruction, professional learning and evaluation of teachers and principals in one place. [CIITS](#)

Professional Development and Implementation Plans

- **Indiana:** Indiana created curriculum maps, and will work with partners like Thinkfinity and the STEM Resource Network to deliver quality digital content through its Learning Connection web portal.
<https://learningconnection.doe.in.gov/Login.aspx>)
<http://www.illustrativemathematics.org>